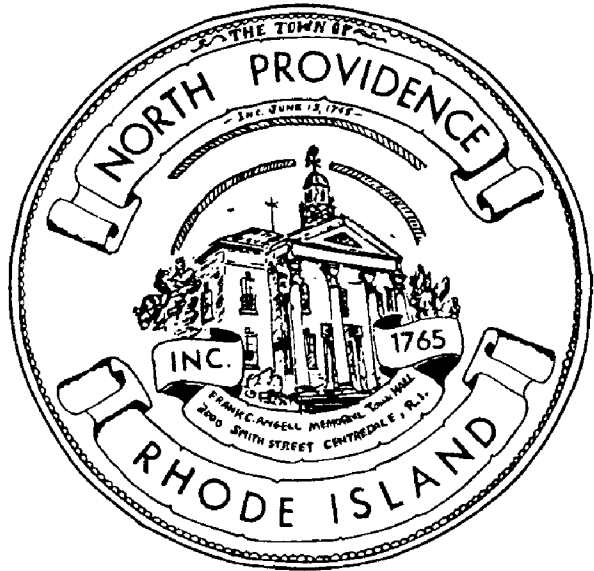


CONSTRUCTION PLANS FOR
THE
BROOK AND WINONA STREET
AREA FLOOD IMPROVEMENT
PROJECT

EAST OF WINONA STREET TO THE
WOONASQUATUCKET RIVER

CHARLES A. LOMBARDI, MAYOR

TOWN OF NORTH PROVIDENCE
RHODE ISLAND



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PROJECT TEAM

Detec.

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7/25/16

TOWN OF NORTH PROVIDENCE
BROOK AND WINONA STREET AREA
FLOOD IMPROVEMENT PROJECT
EAST OF WINONA STREET TO THE WOONASQUATUCKET RIVER
NORTH PROVIDENCE, RHODE ISLAND

REVISIONS:
NO. DATE DESCRIPTION
DESIGNED BY: DMD
DRAWN BY: -
CHECKED BY: DMD
DATE: 7-25-16
PROJECT NO: 07-0101-14
PERMIT SET
COVER
SHEET 1 OF 5

\\N:\D\Amico Engineering Technology, Inc\07-0101 Town of North Providence\14 Winona Brook Street Project\WINONA STREET AREA\Plans\WINONA DRAINAGE CORRIDOR Permit Plan Set 7-25-16.dwg Jul 26, 2016 12:52pm

SITE NOTE(S):

1.

CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (RGD) OF ALL MATERIALS INDICATED ON THE PLANS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
2.

STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES.
3.

ALL DISTURBED AREAS OUTSIDE OF THE PAVED AREAS WILL RECEIVE A MINIMUM OF 6" OF LOAM AND SEED.
4.

THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SURVEY LAYOUT SERVICES FOR THE WORK AND SHALL SUBMIT "AS-BUILT" DRAWINGS OF ALL WORK, WHICH SHALL BE STAMPED AND CERTIFIED BY A RHODE ISLAND REGISTERED PROFESSIONAL LAND SURVEYOR.
5.

ANY ITEM OF WORK NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS REQUIRED FOR THE COMPLETE CONSTRUCTION OF THE PROJECT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND INCLUDED IN THE CONTRACT BID PRICE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING SITE CONDITIONS.
6.

WHERE NECESSARY TO REMOVE CURBS, CATCH BASINS OR DRAINS TO COMPLETE WORK, THE CONTRACTOR SHALL REPLACE SUCH ITEMS TO THE SATISFACTION OF THE TOWN/OWNER AT NO ADDITIONAL COST TO THE OWNER.
7.

ANY EXISTING PIPE OR UTILITY DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER OR TOWN.
8.

THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION OR REPLACE TREES, SHRUBS, FENCES, SIGNS, GUARDRAILS, DRIVEWAYS, SIDEWALKS AND ANY OTHER OBJECT AFFECTED BY THIS OPERATION.
9.

THE TOPS OF ALL CB GRATES, MH COVERS, VALVE BOXES AND CURB BOXES SHALL BE FLUSH WITH GROUND OR PAVEMENT SURFACE LEVEL AND PLUMB, UNLESS OTHERWISE DIRECTED.
10.

ROADWAYS SHALL BE LEFT PASSABLE AT ALL TIMES. CLOSURE OF ROADWAY IN NOT PERMITTED.
11.

THE CONTRACTOR SHALL PROVIDE ACCESS TO ALL DRIVEWAYS AT COMPLETION OF EACH DAY'S WORK.
12.

WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES.
13.

ALL LEDGE TO BE REMOVED BY MECHANICAL MEANS.
14.

ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL PUMPS, DRAINS, WET POINTS, SCREENS, OR OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE OF ALL SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
15.

ALL SITE WORK AND WORK WITHIN RIDOT'S RIGHT-OF-WAY, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, ROADWAY CONSTRUCTION, AGGREGATE MATERIALS, DRAINAGE STRUCTURES, CURBING, SIDEWALK, LANDSCAPING, SAW CUTTING, ETC. SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, AMENDED AUGUST 2013 (WITH LATEST ADDENDA, THE RIDOT STANDARD DETAILS, 1998 EDITION (WITH LATEST ADDENDA).
16.

ALL IMPORTED FILL MATERIAL SHALL BE CLEAN FILL, FREE OF DEBRIS AND ORGANIC MATTER. MATERIAL SHALL BE SUBJECT TO TESTING IF SO DIRECTED BY THE OWNER OR ENGINEER.
17.

SITE TOPOGRAPHY BASED ON ASSUMED DATUM AS NOTED ON THE PLANS.

DRAINAGE SYSTEM MAINTENANCE SCHEDULE:

1.

ALL MAINTENANCE (INCLUDING CLEANINGS) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:

- INSPECTION, REPAIR AND/OR REPLACEMENT OF CATCH BASIN INLET PROTECTION.

- REMOVAL OF SEDIMENT FROM DRAINAGE STRUCTURES AND PIPES DURING AND FOLLOWING THE END OF CONSTRUCTION.
2.

MEASURES NEEDED TO ENSURE THE PROPER OPERATION OF THE STORMWATER RUNOFF (DRAINAGE) AND WATER QUALITY CONTROL SYSTEMS TO INCLUDE INSPECTION, CLEANING AND REPAIRS TO ALL PIPES, INTAKE AND DISCHARGE STRUCTURES (INCLUDING RIP-RAP SPLASH PADS), DETENTION PONDS, SWALES, CATCH BASIN SUMPS, AND MANHOLES.
3.

INSPECTION OF ALL SLOPES, BERMS, AND OTHER CONTROL STRUCTURES (INCLUDING ROADWAY SIDE SLOPES, FOR STRUCTURAL INTEGRITY/STABILITY AND EVIDENCE OF SOIL EROSION PROCESSES, AND MAINTENANCE OF THESE STRUCTURES IF NECESSARY. INSPECTIONS SHALL BE PERFORMED FOLLOWING ALL RAIN EVENTS OF ½ INCH RAINFALL OR MORE IN A 24-HOUR PERIOD, OR BIMONTHLY IF NO RAINFALL.
4.

UPON COMPLETION OF PROJECT CONSTRUCTION, AND PRIOR TO VACATING THE SITE, THE CONTRACTOR SHALL CONDUCT A FINAL INSPECTION, REPAIR ANY VEGETATIVE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES (SEEDING, PLANTING, ETC.) WHERE REQUIRED, AND REPAIR (OR REMOVE WHERE APPROPRIATE) ANY TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL DEVICES. AFTER PERMANENT SOIL STABILIZATION ON THE ENTIRE SITE HAS OCCURRED, ALL TEMPORARY CONTROL MEASURES (EXCLUDING STAKED HAYBALES) MUST BE REMOVED.
5.

REPLANTING, REGRADING, OR OTHER REPAIRS NEEDED AS A RESULT OF SOIL EROSION AND SEDIMENTATION PROCESSES SHALL BE DONE PROMPTLY TO ENSURE PROPER FUNCTIONING OF THE ENTIRE SYSTEM.
6.

WHEN ALL CONSTRUCTION IS COMPLETED, THE SITE HAS BEEN STABILIZED TO PREVENT EROSION AND SEDIMENTATION BY A WELL ESTABLISHED VEGETATIVE COVER, AND THE DRAINAGE IMPROVEMENTS HAVE BEEN INSPECTED AND ACCEPTED BY THE TOWN AND THE OWNER, THE PARTY RESPONSIBLE FOR LONG TERM MAINTENANCE, INSPECTION AND REPAIRS TO ALL DRAINAGE FACILITIES SHOWN ON THESE PLANS, SHALL BE THE OWNER OF THE LOT OR LOTS ON WHICH THE DRAINAGE FACILITIES ARE LOCATED INCLUDING THE UIC, DETENTION BASIN, SWALES, PIPES AND CATCHBASINS.
7.

ANY TRASH, DEBRIS, ETC. SHOULD BE REMOVED FROM THE DETENTION BASIN, SUBSURFACE STORMWATER MANAGEMENT AREA, SWALE(S), INLETS, AND PIPE OUTLETS.
8.

CATCH BASINS, MANHOLES AND DRAIN LINES: AN INSPECTION MUST OCCUR ON AN ANNUAL BASIS BY QUALIFIED PERSONAL TO ENSURE PROPER OPERATION. THE INSPECTION SHOULD, AS A MINIMUM, CONCENTRATE ON THE FOLLOWING:

• DAMAGE TO GRATE AND COVER

• EVIDENCE OF STANDING WATER

• DEBRIS REMOVAL

• STRUCTURAL ALIGNMENT/ INTEGRITY

ANY DEFICIENCY NOTED DURING THE INSPECTION WILL BE IMMEDIATELY REPAIRED OR REPLACED.
9.

THE GRASSSED AREAS SHALL BE INSPECTED AT LEAST TWICE PER YEAR TO CHECK FOR EROSION PROBLEMS. PROBLEM AREAS SHALL BE RE SEEDD IMMEDIATELY TO STABILIZE EXPOSED SOIL, THEREBY PREVENTING EROSION AND POTENTIAL CLOGGING OF OUTFLOW DEVICES.
10.

SEDIMENT REMOVED FROM THE BASIN(S) SHALL BE TESTED FOR HEAVY METALS AND OTHER CONTAMINANTS FOLLOWING OPERATION. IF IT IS FOUND THAT SEDIMENTS ARE CONTAMINATED THEY SHALL BE TRANSPORTED TO A STATE APPROVED DISPOSAL SITE.

EROSION CONTROL & SOIL STAB ILIZATION PROGRAM:

1.

DENuded SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON.
2.

THE SEED MIX SHALL BE INOCULATED WITHIN 24 HOURS, BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.
3.

THE DESIGN MIX SHALL BE COMPRISED OF THE FOLLOWING CONSERVATION MIX:

MIXTURE

% BY WGT.

SEEDING DATES

RED FESCUE

75

APRIL 1 - JUNE 15

COLONIAL BENTGRASS

5

AUG. 15 - OCT. 15

PERENNIAL RYEGRASS

5

BIRDSFOOT TREFOIL

15

TOTAL 100% PER ACRE
4.

TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW OR FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR A FIBER LINING (JUTE, BURLAP, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED.
5.

HAY OR STRAW APPLICATIONS SHOULD BE IN THE AMOUNT OF 3,000 - 4,000 LBS. PER ACRE.
6.

STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED IMMEDIATELY AFTER FINAL GRADING.

SOIL EROSION AND SEDIMENTATION CONTROL NOTE(S):

1.

THE LIMIT OF DISTURBANCE (LOD) LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT.
2.

THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THESE LIMITS, AS DEPICTED ON THE PLAN SHALL BE TOTALLY UNDISTURBED, TO REMAIN IN NATURAL CONDITION.
3.

ALL CATCH BASINS AND CULVERTS SHALL BE PROTECTED WITH STAKED HAYBALES (R.I. STD. 9.8.0) DURING CONSTRUCTION ACTIVITIES. ALL PROPOSED STORM WATER DISCHARGE AREAS SHALL BE LINED WITH A RIPRAP SPLASH PAD AND PROTECTED WITH STAKED HAYBALE OUTLET PROTECTION (R.I. STD. 9.1.0), OR STAKED HAYBALE WITH SILT FENCE (R.I. STD. 9.3.0) SHALL ALSO BE INSTALLED AT ALL EXISTING STORMWATER DISCHARGE LOCATIONS WHERE DISTRIBUTING PIPES, CATCH BASINS, AND MANHOLES ARE TO BE CLEANED AND FLUSHED.
4.

ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDED AREAS TO ENSURE THAT A GOOD STAND IS MAINTAINED.
5.

ALL HAYBALES, TEMPORARY TREATMENT (HAY, STRAW, ETC.) SILT FENCE AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
6.

STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR DRAINAGE STRUCTURES. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED.
7.

THE HAYBALES OR SILT FENCE SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY HAYBALES OR SILT FENCE AS NEEDED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE HAY-BALES BECOMES FILLED WITH SEDIMENTS.

1.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS (HAYBALES, SILT FENCE, ETC.) SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR RESEEDING ALL AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR FROM THE COMPLETION OF CONSTRUCTION.
9.

ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND EROSION AND SEDIMENTATION HANDBOOK", DATED 1993.

DRAINAGE SYSTEM NOTES:

1.

ALL RIM ELEVATIONS SHOWN ARE APPROXIMATE AND ARE TO BE SET FLUSH WITH FINAL GRADES.
2.

THE DESIGN ENGINEER MUST SUBMIT AN AS BUILT PLAN AND A CERTIFICATION TO THE TOWN ENGINEER THAT THE CONSTRUCTION IS IN COMPLIANCE WITH THE DESIGN PLANS FOR ALL ELEMENTS OF THE STORM OR DRAINAGE SYSTEM PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
3.

THE PROPOSED DRAINAGE LINES SHALL BE ADS N-12 (HDEP) OR AN APPROVED EQUAL AS INDICATED ON THESE PLANS.
4.

ALL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH H-20 LOADING CHARACTERISTICS.

LAYOUT NOTE(S):

THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEMS FOUND WHICH DO NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.

BMP MAINTENANCE SCHEDULE:

1.

ALL MAINTENANCE (INCLUDING CLEANING) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:

A. MEASURES NEEDED TO ENSURE THE PROPER OPERATION OF THE STORMWATER RUNOFF (DRAINAGE) AND WATER QUALITY CONTROL SYSTEMS TO INCLUDE INSPECTION, CLEANING AND REPAIRS ALL PIPES, INTAKE AND DISCHARGE STRUCTURES, CATCH BASIN SUMPS, AND MANHOLES.

B. INSPECTION OF ALL SLOPES, BERMS, AND OTHER CONTROL STRUCTURES FOR STRUCTURAL INTEGRITY/STABILITY AND EVIDENCE OF SOIL EROSION PROCESSES, AND MAINTENANCE OF THESE STRUCTURES IF NECESSARY. INSPECTIONS SHALL BE PERFORMED FOLLOWING ALL RAIN EVENTS OF 1/2 INCH RAINFALL OR MORE IN A 24-HOUR PERIOD, OR BI-MONTHLY IF NO RAINFALL EVENT OCCURS.
2.

UPON COMPLETION OF THE PROJECT CONSTRUCTION, AND PRIOR TO VACATING THE SITE, THE CONTRACTOR SHALL CONDUCT A FINAL INSPECTION AND CLEANING OF THE DRAINAGE SYSTEM AND ALL ASSOCIATED STRUCTURES.
3.

AFTER THE COMPLETION OF THE ENTIRE PROJECT TO THE SATISFACTION OF THE OWNER OR ENGINEER, ALL MAINTENANCE OF THE DRAINAGE SYSTEM SHALL THEN BE THE RESPONSIBILITY OF THE OWNER OR HIS/HER APPROVED AGENTS.
4.

AFTER THE COMPLETION OF PROJECT CONSTRUCTION AND THE FINAL STABILIZATION OF THE ENTIRE SITE, THE INSPECTION AND MAINTENANCE OF ALL STORMWATER FACILITIES MUST BE PERFORMED AS FOLLOWS:

A. ANY REQUIRED REPAIR AND REPLACEMENT OF DRAINAGE STRUCTURES OR FACILITIES SHALL BE DONE PROMPTLY TO ENSURE PROPER FUNCTIONING OF THE SYSTEM.

B. CATCH BASINS, MANHOLES, AND THE DETENTION BASIN SHALL BE INSPECTED AT LEAST ONCE PER YEAR AND ANY SEDIMENT OR DEBRIS WITHIN THE SUMPS SHALL BE REMOVED. SEDIMENTS SHALL BE REMOVED FROM THE DETENTION BASIN DURING THE FIRST YEAR OF OPERATION AND EVERY 5 YEARS THEREAFTER. MORE FREQUENT REMOVALS MAY BE NECESSARY IF THE SEDIMENT STORAGE CAPACITY OF THE FOREBAY OR POND IS EXCEEDED OR WHEN THE SEDIMENT DEPTHS REACH 6 INCHES, WHICHEVER COMES FIRST.

C. ALL DESIGN, CLEANING, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL FOLLOW AT LEAST THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION MINIMUM STANDARDS, SECTION 708.03. WHERE APPROPRIATE, PROCEDURES REGARDING THE DRAINAGE DESIGN, AND THE INSPECTION AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL BE FOLLOWED AS OUTLINED IN THE "RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL" (RIDEM/RICRMC, JUNE 30, 2004).

D. ANY TRASH, DEBRIS, ETC SHALL BE REMOVED IMMEDIATELY FROM WETLAND AREAS, DETENTION BASINS, SWALES AND PIPE OUTLETS.

E. DETENTION BASINS AND SWALES SHALL BE MOWED AT LEAST ONCE DURING THE GROWING SEASON TO PREVENT UNWANTED WOODY GROWTH.

F. SWALES AND DETENTION AREAS; SHALL BE INSPECTED AFTER MAJOR STORM EVENTS OR AN ANNUAL BASIS. REPAIRS SHALL BE PERFORMED IMMEDIATELY AS CONDITIONS WARRANT. BARE SPOTS AND ERODED ARE AS SHALL BE RESEEDD IMMEDIATELY FOLLOWING OBSERVATION. ALL LITTER AND TRASH SHALL BE REMOVED DURING INSPECTIONS.

G. CATCH BASINS, MANHOLES AND DRAIN LINES: AN INSPECTION MUST OCCUR ON AN ANNUAL BASIS BY QUALIFIED PERSONNEL TO ENSURE PROPER OPERATION. THE INSPECTION SHOULD, AS A MINIMUM, CONCENTRATE ON THE FOLLOWING:

• DAMAGE TO GRATES AND/OR COVER

• EVIDENCE OF STANDING WATER

• DEBRIS REMOVAL

• STRUCTURAL ALIGNMENT/ INTEGRITY
- ANY DEFICIENCY NOTED DURING THE INSPECTION SHALL BE IMMEDIATELY REPAIRED OR REPLACED.
- H. SEDIMENT REMOVAL: ALL REMOVED SEDIMENT IS TO BE TESTED TO DETERMINE POLLUTANT CONTENT. THE SEDIMENT IS TO BE PROPERLY DISPOSED IN UPLAND AREAS BASED UPON THE TEST RESULTS AND LOCAL, STATE, AND FEDERAL REGULATIONS.
- I. SEDIMENT SHALL BE REMOVED FROM THE DETENTION BASIN SEDIMENT FOREFAY ON A MINIMUM OF EVERY 5 YEARS AND EVERY YEAR FOR EACH CATCH BASIN SUMP. IF SEDIMENT ACCUMULATION IS ADVERSELY IMPACTING THE FUNCTION OF THE BMP, PROPER REMOVAL AND DISPOSAL SHALL BE PERFORMED IMMEDIATELY.

WATER SYSTEM NOTES:

1.

ALL INSTALLATIONS, JOINTS, CONSTRUCTION METHODS AND MATERIALS SHALL BE ACCORDING TO THE PROVIDENCE WATER SUPPLY BOARD (PWSB) REQUIREMENTS, AWWA STANDARDS AND GOVERNMENTAL REQUIREMENTS.
2.

WATER PIPES SHALL TYPICALLY BE LOCATED AT LEAST TEN (10) FEET HORIZONTALLY FROM SEWER PIPES, AND AT A MINIMUM DEPTH OF COVER EQUAL TO 5'. WHERE A NEW WATER PIPE IS LESS THAN 18 INCHES CLEAR DISTANCE ABOVE A SEWER OR WHERE A WATER PIPE PASSES BENEATH A SEWER OR STORM DRAIN, ENCASE THE SEWER OR DRAIN IN 6" OF CONCRETE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING WATER PIPE.
3.

ALL SYSTEM COMPONENTS AND CONSTRUCTION METHODS, SUCH AS PIPE, THRUST BLOCKS, FITTINGS, CASTINGS, ETC. SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION. THIS SUBMISSION SHALL INCLUDE MANUFACTURER'S LITERATURE, SHOP DRAWINGS, PROPOSED CONSTRUCTION METHODS, ETC.
4.

WATER LINE TRENCH TO BE AWWA TYPE 5 A METALIZED DETECTABLE IDENTIFICATION TAPE 2" IN WIDTH, BLUE IN COLOR AND PRINTED WITH "CAUTION WATERLINE BURIED BELOW" SHALL BE UTILIZED OVER ALL MAINS. TAPE SHALL BE SET AT APPROXIMATELY 1' BELOW FINISHED GRADE.
5.

THE CONTRACTOR SHALL RECEIVE VERIFICATION FROM THE PWSB AS TO THE APPROPRIATE SIZE OF THE WATER LINE SHOWN ON THE PLANS PRIOR TO ORDERING WATER PIPE RELATED ITEMS.
6.

ALL SITE WORK, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, GRAVEL, STONE, DRAINAGE PIPE AND RELATED STRUCTURES, WATER, SEWER, AND DRAIN LINE INSTALLATION, PAVEMENT SAW CUTTING, ETC. SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION (RIDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AMENDED 2013 WITH ALL REVISIONS AND LATEST ADDENDA AND THE RIDOT STANDARD DETAILS, 1998 EDITION WITH ALL REVISIONS.
7.

BENDS ARE SHOWN ON THE DRAWINGS AND ARE APPROXIMATE. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED BENDS AS NECESSARY TO INSTALL THE PIPE AT THE REQUIRED DEPTH AND ALIGNMENT.

MAINTENANCE AND PROTECTION OF TRAFFIC NOTE(S):

1.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
2.

TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DIVIDES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
3.

THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED ON PRIVATE PROPERTY.
4.

ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS CHANNELING DEVICES, ETC. SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. 2003 EDITION WITH LATEST AGENDA.
5.

SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE R.I.D.O.T. SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.
6.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL STATE AND LOCAL PERMITS PRIOR TO START OF CONSTRUCTION. THESE PERMITS SHALL INCLUDED BUT ARE NOT LIMITED TO, ROAD OPENING, SOIL EROSION, BUILDING, WATER CONNECTION AND SEWER CONNECTION PERMIT(S). CONTRACTOR SHALL REFER TO TOWN ENGINEERING AND BUILDING DEPARTMENT FOR ALL APPLICABLE PERMITS.

ADS PIPE INSTALLATION NOTES:

1.

FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A STABLE DEPTH AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D321. STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS; LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
2.

BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, OR III AND INSTALLED AS REQUIRED IN ASTM D321, LATEST EDITION. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" FOR 4" TO 24" DIA. & 6" FOR 30" TO 60" DIA.
3.

HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, OR III AND INSTALLED AS REQUIRED IN ASTM D321, LATEST EDITION.
4.

UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

NOMINAL DIA. (IN.)	MINIMUM TRENCH WIDTH (IN.)
6"	23"
8"	25"
10"	28"
12"	31"
15"	34"
18"	39"

SURFACE LIVE LOADING	MINIMUM RECOMMENDED COVER (IN.)
H25 (FLEXIBLE PAVEMENT)	12"
H25 (RIGID PAVEMENT)	12"
HEAVY CONSTRUCTION	48"

GENERAL CONTRACTOR NOTES & REQUIREMENTS:

1.

THE CONTRACTOR IS TO NOTIFY DIG SAFE PRIOR TO CONSTRUCTION.
2.

A PRE-CONSTRUCTION MEETING IS REQUIRED. THE SCHOOL FACILITIES MANAGER AND TOWN ENGINEER SHALL BE NOTIFIED PRIOR TO CONSTRUCTION.
3.

CONTRACTOR TO OBTAIN ALL FEDERAL, STATE, AND MUNICIPAL APPROVALS (IF APPLICABLE) PRIOR TO THE START OF CONSTRUCTION.
4.

ALL CATCH BASINS AND MANHOLES TO BE 4FT DIAMETER UNLESS SPECIFIED OTHERWISE.
5.

COMPACT, LOAM & SEED ALL DISTURBED AREAS. ADDITIONAL EROSION CONTROLS MAY BE REQUIRED BY THE SITE OR TOWN ENGINEER.
6.

AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE. DEVIATIONS OR CHANGES WILL NOT BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
7.

THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. THE CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK.
8.

METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS FOR THIS PROJECT SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE TOWN OF NORTH PROVIDENCE AND THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION.
9.

THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION AND VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIALS SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK.
10.

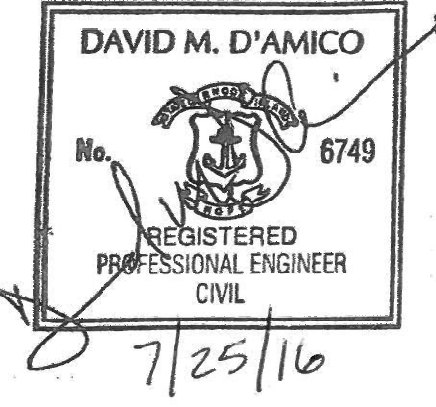
CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST TWO WORKING DAYS, BUT NOT MORE THEN TEN WORKING DAYS, PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. ALL WATER, GAS, SEWER AND OTHER UTILITIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
11.

THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT, EXCEPTING FOR LIABILITY ARISING FROM "THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER."
12.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND TO TAKE WHATEVER STEPS NECESSARY TO PROVIDE FOR THEIR PROTECTION. THE ENGINEER HAS DILIGENTLY ATTEMPTED TO LOCATE AND INDICATE ALL EXISTING FACILITIES ON THESE PLANS; HOWEVER, THIS INFORMATION IS SHOWN FOR THE CONTRACTORS CONVENIENCE ONLY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES FOR EXACT LOCATION OF THEIR UTILITIES PRIOR TO STARTING CONSTRUCTION. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND REPLACE ANY AND ALL DAMAGED MADE TO UTILITIES BY THE CONTRACTOR.

LEGEND

	EXISTING PROPERTY LINE
	ABUTTING PROPERTY LINE
	BUILDING SETBACK LINE
	WETLAND EDGE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING STONE WALL
	IRON ROD
	DRILL HOLE
	CONCRETE BOUND
	EXISTING CURB
	CHAIN LINK FENCE
	DRAIN LINE
	DRAINAGE MANHOLE
	CATCH BASIN
	UTILITY POLE
	OVERHEAD WIRES
	UNDERGROUND ELECTRIC
	GAS LINE
	WATER LINE
	WATER SHUT OFF VALVE
	GAS VALVE
	SEWER
	SMH
	N/F
	NOW OR FORMERLY
	LIMIT OF DISTURBANCE
	SOIL EVALUATION
	BUILDING DOOR LOCATION
	CUT AND MATCH LINE (SAW CUT)
	HANDICAPPED PARKING
	STOP SIGN
	ELECTRIC SIGN
	PAINTED TRAFFIC ARROW
	LIGHT POLE
	CLEAN OUT
	SPOT GRADE



TOWN OF NORTH PROVIDENCE
BROOK AND WINONA STREET AREA
FLOOD IMPROVEMENT PROJECT
EAST OF WINONA STREET TO THE WOONASQUATUCKET RIVER
NORTH PROVIDENCE, RHODE ISLAND

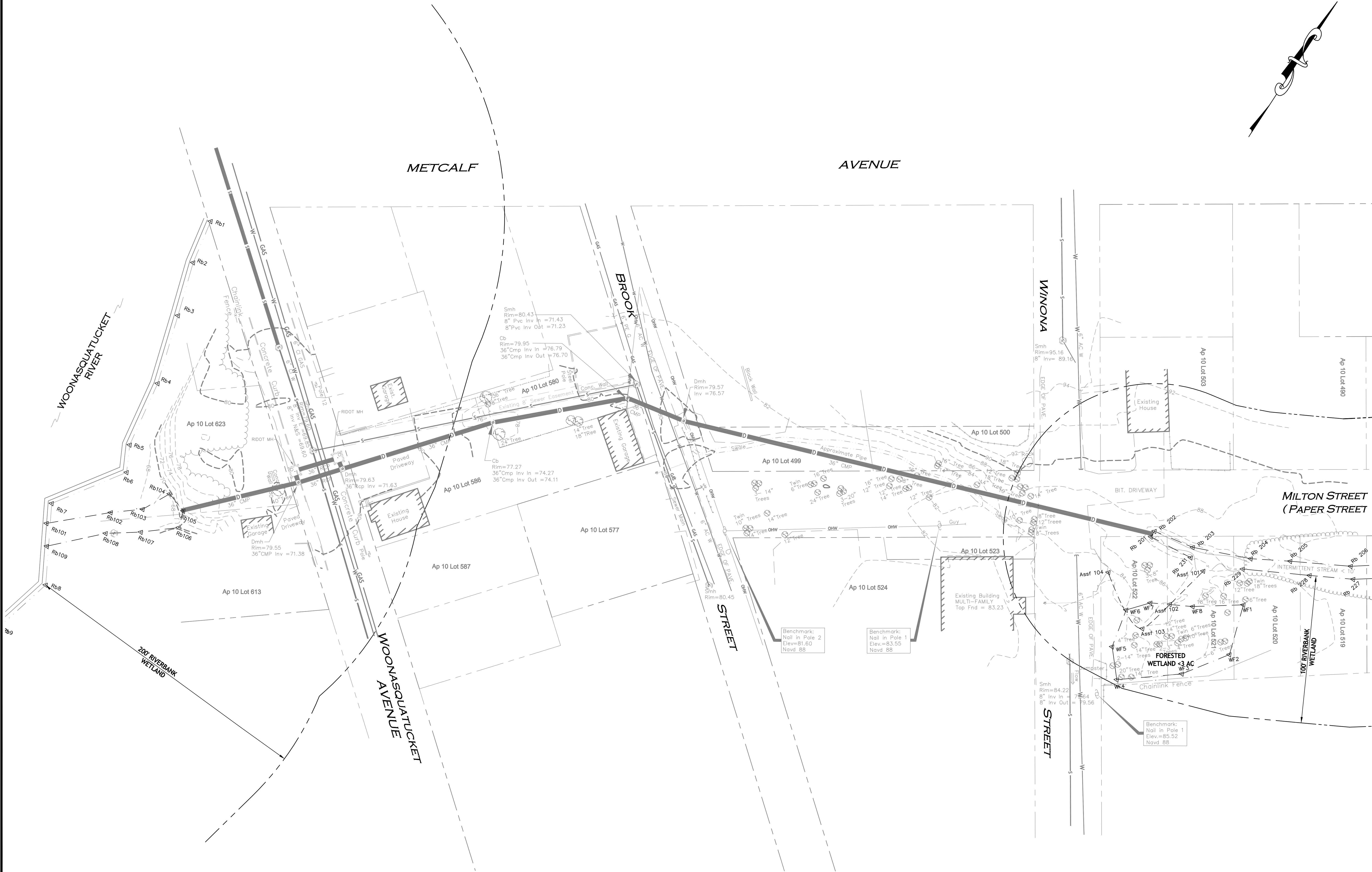
REVISIONS:
NO. DATE DESCRIPTION

DESIGNED BY: DMD
DRAWN BY: -
CHECKED BY: DMD
DATE: 7-25-16
PROJECT NO: 07-0101-14

PERMIT SET

GENERAL
NOTES
&
Legend

SHEET
2 OF 5



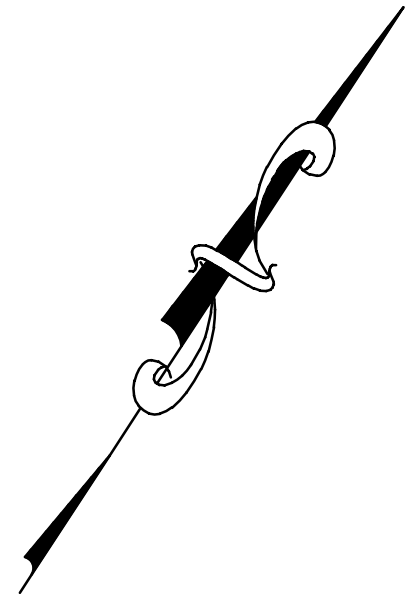
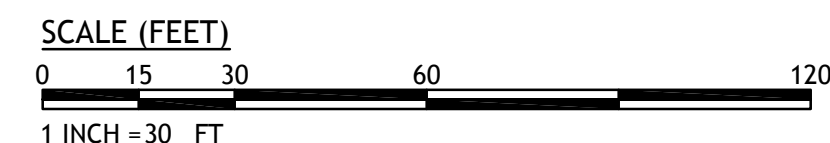
NOTE: THE LOCATION AND DEPTHS OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATION OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. RESTORATION AND REPAIR OF DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR TOWN WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCED.

TOPOGRAPHIC SURVEY CONDUCTED BY:

MARC N. NYBERG ASSOCIATES, INC.
LAND SURVEYORS and PLANNERS
501 GREAT ROAD, UNIT 104
NORTH SMITHFIELD, RHODE ISLAND 02896
TEL (401) 762-2870 FAX (401) 762-2871

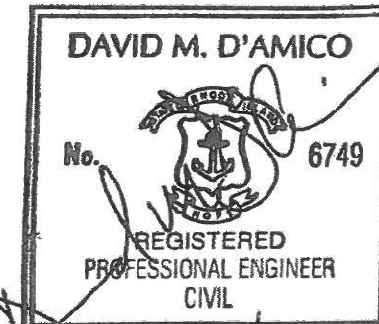
NOTES:

1. INFORMATION BY DETEC PROVIDED ON THIS EXISTING CONDITIONS PLAN IS TO AUGMENT THE BASE SURVEY FOR PERMITTING AND DESIGN WITH THE ADDITION OF SITE SPECIFIC FEATURES AND SITE UTILITIES TAKEN FROM RECORDS AND SITE ON-THE-GROUND MEASUREMENTS. THE PE STAMP IS AFFIXED FOR THIS INFORMATION ONLY.
2. VERTICAL DATUM IS NAVD 88.



DEtec.

D'AMICO ENGINEERING TECHNOLOGY, INC.
Civil • Transportation • Land Use
2080 Mineral Spring Ave., North Providence, RI 02911
(401) 622-1470 (401) 353-1190 fax www.damicoengineering.com



**TOWN OF NORTH PROVIDENCE
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PERMIT SET

EXISTING CONDITIONS

**SHEET
3 OF 5**

